

In The Claims:

1-34 (Cancelled)

35. (Currently Amended) A research or diagnostic kit comprising (a) at least one or more probes for the detection of the presence or absence and/or the level of the over-expression of at least one INK4a gene product polypeptide and (b) one or more probes for the detection of at least one cell proliferation polypeptide marker gene product in biological samples,

wherein the kit components are provided in a way to allow for a simultaneous detection of the at least one INK4a polypeptide and the at least one cell proliferation polypeptide marker, by at least two distinguishable detectable signals.

36. (Currently Amended) The kit according to claim 35, wherein the INK4a gene products are polypeptide is selected from the group consisting of p16^{INK4a} and p14ARF.

37. (Currently Amended) The kit according to claim 35, wherein the cell proliferation polypeptide marker gene products are is selected the group consisting of CDC6, MCM3 MCM2, MCM3, MCM4, MCM5, MCM6, MCM7, CDC7 protein kinase, Dbf4, CDC14 protein phosphatase, CDC45 and MCM10, Ki67, Ki-S2, Ki-S5, PCNA and POLD.

38. (Currently Amended) The kit according to claim 35 furthermore comprising at least one of the following:

- a. a p16^{INK4a} sample for carrying out a positive control reaction,
- b. a p14ARF sample for carrying out a positive control reaction,
- c. a Ki67 sample for carrying out a positive control reaction,
- d. a Ki-S2 sample for carrying out a positive control reaction,
- e. an MCM5 sample for carrying out a positive control reaction,
- f. an MCM2 sample for carrying out a positive control reaction,
- g. a PCNA sample for carrying out a positive control reaction,
- h. reagents for detection of the presence or absence and/or the level of p16INK4a,

- i. reagents for detection of the presence or absence and/or the level of p14ARF,
- j. reagents for detection of the presence or absence and/or the level of Ki67,
- k. reagents for detection of the presence or absence and/or the level of Ki-S2,
- l. reagents for detection of the presence or absence and/or the level of MCM5,
- m. reagents for detection of the presence or absence and/or the level of MCM2,
- n. reagents for detection of the presence or absence and/or the level of PCNA,
- o. one or more samples of INK4a ~~gene products~~ polypeptide for carrying out positive control reactions,
- p. one or more samples of cell proliferation ~~polypeptide~~ marker ~~gene products~~ for carrying out positive control reactions,
- q. one or more reagents for the detection of the presence or absence and/or the level of other INK4a ~~gene products~~ polypeptides, or
- r. and one or more reagents for the detection of the presence or absence and/or the level of other cell proliferation ~~marker gene products~~ polypeptide markers.

39. (New) The kit according to claim 35, wherein the one or more probes for the detection of the over-expression of at least one INK4a polypeptide and the one or more probes for the detection of at least one cell proliferation polypeptide marker are labelled with distinguishable labels.

40. (New) The kit according to claim 35, wherein the cell proliferation polypeptide marker is Ki67, Ki-S2, or Ki-S5.

41. (New) The kit according to claim 40, wherein the cell proliferation polypeptide marker is Ki67.

42. (New) The kit according to claim 35, wherein said labels are selected from the group consisting of radioisotopes, bioluminescent compounds, chemiluminescent compounds, fluorescent compounds, metal chelates, and enzymes.

43. (New) The kit according to claim 42, wherein said labels are fluorescent compounds or enzymes.

44. (New) The kit according to claim 35, wherein said one or more probes (a) are antibodies against the at least one INK4a polypeptide.
45. (New) The kit according to claim 35, wherein said one or more probes (b) are antibodies against the at least one proliferation polypeptide marker.
46. (New) The kit according to claim 35, wherein the cell proliferation polypeptide marker is MCM2, MCM3, MCM4, MCM5, MCM6, MCM7, CDC7.
47. (New) The kit according to claim 46, wherein the cell proliferation polypeptide marker is MCM2.